LISTING OF CLAIMS

The listing of claims provided below replaces all prior versions, and listings, of claims in the application.

Claims 1-5 (cancelled)

6.   (currently amended) A method for adaptively filtering a video signal prior to encoding, comprising:

calculating a local gradient indicative of a region type within a <u>single</u> frame of the video signal, the region type being one of an edge region or a smooth region;

determining a weight factor based upon the local gradient; and

applying the weight factor to a difference signal according to the region type, the difference signal representing a difference between <u>the single frame of</u> the video signal and an output of a smoothing filter which <u>data representing the single frame of the video signal</u> passes.

7.   (original) The method of claim 6, wherein the method operation of calculating a local gradient indicative of a region type includes,

defining a neighborhood of values around a current pixel value; and

quantifying a difference between each of the neighborhood of values and the current pixel value.

8.   (original) The method of claim 7 further comprising:

comparing the difference to a threshold value; and

applying a smoothing function to the current pixel value when the difference is greater than the threshold value.

9.   (previously presented) The method of claim 6, further comprising:

applying the smoothing filter to the video signal;

calculating the difference between the video signal and an output of the smoothing filter; and

representing the difference between the video signal and the output of the smoothing filter as the difference signal.

10.   (original) The method of claim 6, further comprising:

receiving a signal to reduce a bit rate; and

in response to receiving the signal the method includes,

       applying a smoothing filter to the video signal.

11.   (original) The method of claim 6, wherein the method operation of applying the weight factor to a difference signal according to the region type includes,

constructing the weight factor in a manner such that a higher weight factor diminishes a contribution of a smoothing filter.

Claims 12-19 (cancelled)

20.   (currently amended) A computer readable medium having physically stored thereon computer program instructions for adaptively filtering a video signal prior to encoding, comprising:

program instructions for calculating a local gradient indicative of a region type within a single frame of the video signal, the region type being one of an edge region or a smooth region;

program instructions for determining a weighting factor based upon the local gradient; and

program instructions for applying the weighting factor to a difference signal according to the region type, the difference signal representing a difference between the single frame of the video signal and an output of a smoothing filter which data representing the single frame of the video signal passes.

21.   (original) The computer readable medium of claim 20, wherein the program instructions for calculating a local gradient indicative of a region type includes,

program instructions for defining a neighborhood of values around a current pixel value; and

program instructions for quantifying a difference between each of the neighborhood of values and the current pixel value.

22.   (original) The computer readable medium of claim 20, wherein the program instructions for determining a weighting factor based upon the local gradient includes,

program instructions for normalizing a difference between each of the neighborhood of values and the current pixel value.

23.   (previously presented) The computer readable medium of claim 20, further comprising:

program instructions for applying the smoothing filter to the video signal;

program instructions for calculating the difference between the video signal and an output of the smoothing filter; and

program instructions for representing the difference between the video signal and the output of the smoothing filter as the difference signal.

24.   (original) The computer readable medium of claim 20, further comprising:

program instructions for receiving a signal to reduce a bit rate; and

in response to receiving the signal the computer readable medium includes,

      program instructions for applying a smoothing filter to the video signal.

25.   (original) The computer readable medium of claim 20, wherein the program instructions for applying the weighting factor to a difference signal according to the region type includes,

program instructions for constructing the weighting factor in a manner such that a higher weighting factor diminishes a contribution of a smoothing filter.

Claims 26-28 (cancelled)

29.   (currently amended) An integrated circuit, comprising:

circuitry for filtering a signal prior to transmission to an encoding loop, the circuitry for filtering including,

circuitry for calculating a gradient between a pixel value and a neighboring pixel value within a same frame of the signal;

circuitry for determining a weight factor based upon the local gradient; and

circuitry for applying the weight factor to a difference signal according to a region type associated with the local gradient, wherein the difference signal represents a difference between <u>the single frame of</u> the video signal and an output of a smoothing filter which <u>data representing the single frame of the video signal</u> passes, and wherein the region type is one of an edge region or a smooth region.

30.   (original) The integrated circuit of claim 29, wherein the circuitry for calculating a local gradient indicative of a region type includes,

circuitry for defining a neighborhood of values around a current pixel value; and

circuitry for quantifying a difference between each of the neighborhood of values and the current pixel value.

31.   (original) The integrated circuit of claim 29, wherein the circuitry for determining a weight factor based upon the local gradient includes,

circuitry for normalizing a difference between each of the neighborhood of values and the current pixel value.

32.   (original) The integrated circuit of claim 29, further comprising:

circuitry for applying a smoothing filter to the video signal;

circuitry for calculating a difference between the video signal and an output of the smoothing filter; wherein the difference between the video signal and the output of the smoothing filter represents the difference signal.

33.   (original) The integrated circuit of claim 29, further comprising:

circuitry for receiving a signal to reduce a bit rate; and

circuitry for applying a smoothing filter to the video signal.

34.   (original) The integrated circuit of claim 29, wherein the circuitry for applying the

weight factor to a difference signal according to the region type includes,

circuitry for constructing the weight factor in a manner such that a higher weight factor

diminishes a contribution of a smoothing filter.

Claims 35-39 (cancelled)

40.   (new) The method of claim 6, wherein the local gradient is calculated for a

neighborhood of pixels proximate to a pixel within the single frame.

41.   (new) The computer readable medium of 20, wherein the local gradient is

calculated for a neighborhood of pixels proximate to a pixel within the single frame.

42.   (new) The integrated circuit of claim 29, wherein the local gradient is calculated

for a neighborhood of pixels proximate to a pixel within the single frame of the video

signal.